AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-22. (Cancelled).

23. (Currently Amended) An apparatus for carrying out a heterogeneously catalyzed reaction, comprising:

at least one pair of alternating first and second <u>porous</u> catalyst layers;

the first catalyst layer comprising

an educt opening passing therethrough, and

an educt channel formed in a planar surface of the first catalyst layer and fluidly connected to the educt opening; and

the second catalyst layer comprising

a product opening passing therethrough, and